CONSULTING
COMMUNICATIONS
ENGINEERS

November 2, 1998

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Office of the Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington DC 20554

JOHN J. DAVIS
& ASSOCIATES

Gentlepersons:

Enclosed is an original and fourteen copies of a Petition for Rulemaking in the matter of amending Section 74.1204(f) of the Commission's Rules related to FM translator operation.

I respectfully request your thorough consideration of this proposal.

Very truly yours,

John J. Davis, P.E.
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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the matter of)
Amendment of Section 74.1204(f))
of the Commission's Rules)

TO: The Commission

PETITION FOR RULEMAKING

I, John J. Davis, Consulting Engineer, respectfully propose changes to Section 74.1204(f) of the Commission's FM Translator Rules to eliminate the ambiguity with respect to what constitutes interference and to incorporate a more acceptable methodology for determining interference.

BACKGROUND INFORMATION

FM translators are considered secondary services and, as such, their operation cannot in any way cause interference to full service stations. This has long been an established principle in the Rules. Section 74.1204(f) was added to the Rules in 1991 to provide further protection to full service stations. Section 74.1204(f) states:

> "An application for an FM translator station will not be accepted for filing even though the proposed operation would not involve overlap of field strength contours with any other station, as set forth in paragraph (a) of this section, if the predicted 1 mV/m field strength contour of the FM translator station will overlap a populated area already receiving a regularly used, off-the-air signal of any authorized co-channel, first, second or third adjacent channel broadcast station, including Class D (secondary) noncommercial educational FM stations and grant of the authorization will result in interference to the reception of such signal."

The problem with Section 74.1204(f), as currently written, is that the use of the 1 mV/m (60 dBu) field strength contour is inappropriate where the predominant consideration should be the protection of full service stations from interference. The use of the 60 dBu contour in Section 74.1204(f) is not an appropriate indicator of what constitutes interference in such cases. A translator's coverage area and any interference to a full service station, does not stop at the translator's 60 dBu contour boundary. The deficiencies of Section 74.1204(f) have led to instances where interference can be shown scientifically to exist, using acceptable methods employed by the Commission in other proceedings, but, for the full service station seeking protection from interference there is little recourse as the more acceptable methods to predict interference do not fall within the requirements of Section 74.1204(f), as currently written.

The Commission has long recognized that interference to co-channel, first, second and third adjacent channel stations can occur when a certain signal level (later defined) is exceeded. This should be the criteria used to determine if there is interference likely to be caused by a proposed FM translator. Translator applicants have sometimes used the deficiencies of Section 74.1204(f) to their advantage by placing their proposed translators on high mountains away from populated areas with the result that the proposed 60 dBu contour encloses no populated area but where there is a sizable population (the desired service area) just beyond the proposed translator's 60 dBu contour. The full service station likely to be interfered with is left with no recourse, before the fact (grant of the translator application), to demonstrate that damaging interference will exist. This proposal will eliminate this short-coming.

PROPOSED CHANGES TO SECTION 74.1204(f)

The changes being proposed here will substitute an "interference area" in place of the 60 dBu contour for co-channel and first adjacent channel situations. Section 74.1204(f) would remain unchanged with respect to second and third adjacent channel situations but would be expanded to provide an exact definition of where interference would occur. The Commission has long held that the use of interference areas was the only appropriate method of defining interference to co-channel and first adjacent channel situations. While just as applicable, the Commission has chosen to continue to rely on interference contours to define interference when it comes to second and third adjacent channels. This proposal will follow the Commission's past practices in this area.

The proposed rewording for the amended Section 74.1204(f) would be as follows:

"An application for an FM translator station will not be accepted for filing even though the proposed operation would not involve overlap of field strength contours with any other station, as set forth in paragraph (a) of this section, if

(1) For co-channel and first adjacent channel stations, within the interference area, as defined in (i) and (ii) below, there is a population already receiving a regularly used, off-the-air signal of any authorized co-channel or first adjacent channel broadcast station.

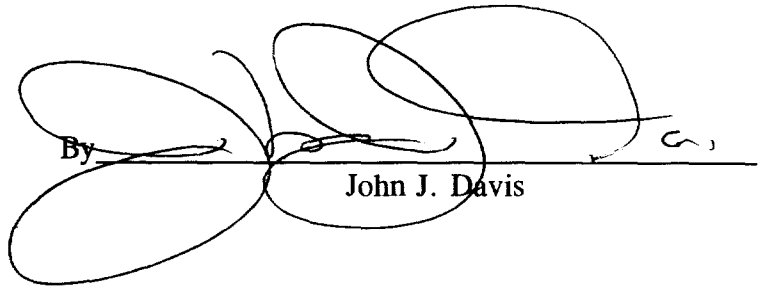
(i) Co-channel interference is predicted to exist, for the purpose of this section, at locations where the undesired (translator interfering signal) F(50,10) field strength exceeds a value 20 dB below the desired (service) F(50,50) field strength of the full service station being considered (e.g., where the field strength of the full service station is 57 dBu, the interfering field strength must be 37 dBu or more for predicted interference to exist).

(ii) First-adjacent channel interference is predicted to exist, for the purpose of this section, at all locations where the undesired (interfering translator station) F(50,10) field strength exceeds a value 6 dB below the desired (service) F(50,50) field strength of the full service station being considered (e.g., where the full service field strength is 57 dBu, the interfering field strength must be 51 dBu or more for predicted interference to exist).

SUMMARY

The above changes will result in the use of the best methodology available to predict interference to any full service co-channel, first, second, or third adjacent channel stations. This methodology is used regularly by the Commission in other FM service proceedings. The preparation of interference area plots will not cause any unnecessary burden upon applicants or the Commission as such plots are very easy to generate using commercially available contour plotting programs.

Respectfully submitted



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